REMARKS/ARGUMENTS

Reconsideration is respectfully requested of the Office Action of September 14, 2005, relating to the above-identified application.

In the interest of greater clarity, Claim 19 has been revised and rearranged to more particularly point out and distinctly claim applicants' contribution to the art. Claim 1 has also been amended to clarify the "wppm" limitation. Consequently, applicants submit that the claims are free of the rejection under 35 U.S.C. § 112.

Claims 22 and 23 have been amended to clarify a minor typographical error.

The rejection of Claims 1 to 27 under 35 U.S.C. § 103(a) as unpatentable in view of *Schreyer, et al.* (US 3,761,580), taken with the combination of *Logan, et al.*, (US 3,912,766), *Signorini, et al.* (US 5,302,367) and *Tsao* (US 4,889,689) is traversed and reconsideration is respectfully requested.

The Official Action takes the position that *Schreyer, et al.* discloses the claimed process except for the steps of stabilizing (step d) and regenerating (step g).

Logan, et al. is relied on in the Official Action to show the industry is aware that degraded working solutions result in the cyclic process for producing hydrogen peroxide.

Signorini, et al. and *Tsao* are relied on to show stabilizing compounds.

The Official Action alleges that it would be obvious to regenerate the working solutions of *Schreyer, et al.* "...since it would be inefficient to operate the process of *Schreyer, et al.* with non-useful quinine compounds present in the working solution."

Further, the Official Action alleges that the addition of the stabilizing step is obvious "to obtain a hydrogen peroxide solution containing at least 100 wppm anions or compounds that can dissociate to form anions in total...".

Applicants disagree with the Official Action and submit that the combination of references does not create *prima facie* obviousness of the claimed invention.

Applicants respectfully submit that *Schreyer, et al.* ('580) differs from the subject matter of process Claim 19 by more than the stabilization of the extracted aqueous hydrogen peroxide solution.

Attention is invited to the wording of present Claim 19, especially features b), c) and f), where it is recited that the oxidized working solution is extracted with water in order to recover an aqueous hydrogen peroxide solution. Therefore, it is also necessary to dry the working solution after extracting hydrogen peroxide due to the amount of water that is introduced by the extracting step. In contrast thereto, *Schreyer, et al.* ('580) discloses a process wherein hydrogen peroxide is desorbed by solvent vapor and only the desorbed stream containing solvent and hydrogen peroxide is extracted with water according to the teaching of that reference. Thus, in the *Schreyer, et al.* ('580) process, the working solution does not come into contact with water and, consequently, it is also not necessary to dry the working solution.

It can be seen that *Schreyer, et al.* is lacking with respect to three features. First, the reference fails to show extraction of the oxidized working solution using water; second, no drying of the extracted working solution is shown; and, finally, no teaching to stabilize the aqueous hydrogen peroxide solution. No reason, suggestion or motivation is present in *Schreyer, et al.* leading a person skilled in the art to the claimed invention.

A person skilled in the art considering *Logan, et al.* (US 3,212,766) would only obtain the information how to regenerate a working solution without a teaching of where the step should be inserted. Thus, would a person skilled in the art introduce a regeneration step either between step 1 and 2 of the *Schreyer* process or between step 3 and 1 of the *Schreyer* process? In addition, the person skilled in the art would not obtain any suggestion to change the extraction step, to carrying out a stabilization, or to use a drying step.

Signorini, et al., (US 5,302,367) relates to providing a stabilizer to the oxidation step of the anthraquinone process, whereby the stabilizer is not present in the final hydrogen peroxide solution but is separated from the hydrogen peroxide solution and recycled into the anthraquinone process. Consequently, *Signorini, et al.* does not disclose a specifically stabilized hydrogen peroxide solution. In the process of *Signorini, et al.*, hydrogen peroxide is distilled off in a distillation unit whereby a purge stream is obtained that contains practically all inorganic components and, thus, also the stabilizer, The citation to *Signorini, et al.*, col. 6, lines 60-56, relates to the addition of stabilizer in order to supplement the stabilizer in the recycle loop between distillation and

extraction. This has nothing to do with the addition of stabilizer to the purified and concentrated hydrogen peroxide solution as called for by the claims herein.

A person skilled in the art would immediately recognize that the recycle of stabilizer into the oxidation step of the anthraquinone process with the purge of the hydrogen peroxide distillation which is the subject matter of *Signorini, et al.*, is not applicable to the process of *Schreyer, et al.* This is so for the reason that in the process of *Schreyer, et al.*, the hydrogen peroxide end product is obtained as the bottom product of the distillation. Therefore, there is no possibility in the process of *Schreyer, et al.*, to separate the nonvolatile stabilizer with the purge of the hydrogen peroxide distillation column from the hydrogen peroxide end product in order to recycle the stabilizer into the anthraquinone process.

Consequently, a person skilled in the art would immediately realize that the teachings of *Schreyer, et al.*. and *Signorini, et al.* cannot be combined at all.

Additionally, in the *Schreyer, et al.* reference, due to the solvent stripping step, there is no problem that nonvolatile stabilizers present in the oxidation step are extracted from the working solution. Accordingly, there is no need to recycle the stabilizers back into the anthraquinone process and, therefore, a person skilled in the art has no motivation at all to apply the teaching of *Signorini, et al.* to the process of *Schreyer, et al.* since the problem solved by the *Signorini, et al.*. process does not even occur in the *Schreyer, et al.* process.

It should be further noted that a person skilled in the art would not be lead to combine the *Schreyer, et al.* teaching with the *Tsao* reference, since *Tsao* deals with a totally different technical problem, i.e. the disinfection of contact lenses using physiologically acceptable solutions. In *Tsao, et al.*, there is no information whatsoever with respect to how to make hydrogen peroxide. *Tsao, et al.* is considered non-analogous art. Consequently, in *Tsao, et al.*, the person skilled in the art would not find any motivation to modify the *Schreyer* process to use a water extraction of the oxidized working solution and drying of the working solution. And even if a person skilled in the art would learn from *Tsao* that stabilizing of hydrogen peroxide solution might be advantageous for the specific application described for contact lenses, he would only be motivated to use alkali metal salts of the stabilizers in order to achieve isotonic conditions. Therefore, a person skilled in the art combining *Schreyer, et al.* and *Tsao, et al.* and using the stabilization as taught by *Tsao, et al.*

would apply high amounts of alkali metal salts which is clearly contrary to the teaching of the present invention since also process Claim 19 clearly defines that under no circumstances should high amounts of alkali metal ions be introduced into the system.

Thus, even the combination of *Schreyer, et al.* and *Tsao, et al.* would lead to a process that is contrary to the teaching of the present invention.

To establish a *prima facie* obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure, *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification. *In re Linter,* 458 F.2d 1013, 173 USPQ 560, 562 (CCPA 1972).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine,* 837 F2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones,* 958 F2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills,* 916837 F2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

A statement that the modifications of the prior art to meet the claimed invention would have been "'well within the ordinary skill of the art at the time the claimed invention was made'" because the references relied upon teach that all aspects of the claimed invention were

individually known in the art is not sufficient to establish a *prima facie* obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood,* 28 USPQ 2d, 1300 (Bd. Pat. App. & Int. 1993).

Therefore, in view of the above, applicants respectfully submit no *prima facie* obviousness for Claims 1 to 27 has been established. Withdrawal of the rejection is respectfully requested.

The rejection of Claims 1 to 15 under 35 U.S.C. § 102(b) or 103(a) in view of *Tsao, et al.* is traversed and reconsideration is respectfully requested.

Claim 1 of *Tsao* '689 clearly reveals that this reference deals with a stabilized aqueous hydrogen peroxide solution that is physiologically tolerable to the ocular environment. In col. 3, lines 64-68, it is defined what is to be understood by physiologically tolerable to the ocular environment. Therein it is stated that tonicity enhancing agents should be added to the hydrogen peroxide solution to result in an isotonic solution, i.e. substantially equivalent to 0.9 percent by weight aqueous sodium chloride solution. According to col. 3, lines 51-83, of the *Tsao, et al.* reference, preferably alkali metal salts are used in order to produce an isotonic solution. As is evident from Example 1 of the *Tsao, et al.* reference, 0.87 wt-% sodium chloride is added resulting in a content of sodium ion of 3400 wppm absolute, and taking into account the concentration of hydrogen peroxide in that solution of 3 wt-%, this correlates to 110,000 wppm based on the weight of hydrogen peroxide in sold solution. In example 1, in addition to sodium chloride also sodium phosphate is added and, if necessary, the pH is adjusted by adding sodium hydroxide. Consequently, *Tsao, et al.* teaches an isotonic low concentrated hydrogen peroxide solution having a sodium ion content based on the weight of hydrogen peroxide that is higher by several magnitudes than the upper limit for the alkali metal concentration according to the claims herein. It follows that *Tsao* does not inherently teach a low alkali metal ion concentration; but on the contrary, *Tsao* teaches a very high alkali metal ion concentration in order to obtain an isotonic solution.

Therefore, *Tsao* fails to anticipate the subject matter of the claims herein.

Neither does *Tsao* render obvious the subject matter of Claim 1, since a person skilled in the art cannot conclude from *Tsao*, especially in view of the fact that high amounts of alkali metal

ions are essential to provide an isotonic hydrogen peroxide solution, that a starting hydrogen peroxide solution should be used with a very low alkali metal ion content as required by the present invention. A person skilled in the art would immediately recognize that any commercially available hydrogen peroxide solution would not have enough sodium ions present in order to fulfill the requirement of an isotonic solution, with the result that under any circumstances additional alkali metal, especially sodium salts like sodium chloride, would have to be added to the solution anyway. Therefore, there is no reason in the reference leading a person skilled in the art to start from a hydrogen peroxide solution that is extremely low in alkali metal ion content. Thus, the teaching of *Tsao* fails to render obvious the subject matter of present Claim 1. On the contrary, the person skilled in the art is directed into a totally different direction, i.e. to use a hydrogen peroxide solution that has already an inherently high ionic concentration in order to reduce the amount of additional salts to be added when making the hydrogen peroxide solution.

The rejection of Claims 1 to 15 should therefore be reconsidered and withdrawn.

Favorable action at the Examiner's earliest convenience is respectfully requested.

Respectfully submitted,

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